

We Claim:

1. A temperature sensor arrangement comprising:
a sensor cavity, a temperature sensing element being positioned along a
center line of said sensor cavity and generating a signal indicating
5 temperature of air flowing thereto; and
a generally cylindrical outer casing surrounding said sensor cavity, said
outer casing including a pattern of flow passages for allowing air flow to
said temperature sensing element in said sensor cavity, said flow
passages being angled such that there is no direct line of air flow from an
10 exterior of said outer casing to said sensing element.
2. The temperature sensor arrangement according to claim 1,
wherein said angled flow passages prevent airborne debris from directly
impacting said temperature sensing element.
3. The temperature sensor arrangement according to claim 1,
15 wherein said flow passages are generally circular holes.
4. The temperature sensor arrangement according to claim 1,
further comprising:
a front face on one end of said generally cylindrical outer casing, said
front face including a pattern of openings for evacuating debris from said
20 sensor cavity.
5. The temperature sensor arrangement according to claim 1,
wherein said temperature sensor arrangement is configured to protrude
into an air passage, such that said generally cylindrical outer casing is
substantially perpendicular to the airflow.
- 25 6. The temperature sensor arrangement according to claim 5,
wherein said air passage is a duct of an aircraft.
7. The temperature sensor arrangement according to claim 6,
wherein said aircraft duct is part of an aircraft bleed air system.

8. The temperature sensor arrangement according to claim 1, wherein said generally cylindrical outer casing is formed of stainless steel.

9. The temperature sensor arrangement according to claim 1, wherein said pattern of flow passages is formed by drilling into said
5 generally cylindrical outer casing at an angle that is a function of a thickness dimension of said outer casing.

10. The temperature sensor arrangement according to claim 1, wherein the flow passages in said generally cylindrical outer casing are equally spaced.

10 11. A temperature sensor arrangement comprising:
a sensor cavity, a temperature sensing element being positioned along a center line of said sensor cavity and generating a signal indicating temperature of air flowing thereto; and
a generally cylindrical outer casing surrounding said sensor cavity, said
15 outer casing including a pattern of flow passages for allowing air flow to said temperature sensing element in said sensor cavity, said flow passages being offset relative to a center line of the housing cavity such that there is no direct line of air flow from an exterior of said outer casing to said sensing element.

20 12. The temperature sensor arrangement according to claim 11, wherein said pattern of offset flow passages prevents airborne debris from directly impacting said temperature sensing element.

13. The temperature sensor arrangement according to claim 11, wherein said flow passages are generally circular holes.

25 14. The temperature sensor arrangement according to claim 11, further comprising:
a front face on one end of said generally cylindrical outer casing, said front face including a pattern of openings for evacuating debris from said sensor cavity.

15. The temperature sensor arrangement according to claim 11, wherein said temperature sensor arrangement is configured to protrude into an air passage, such that said generally cylindrical outer casing is substantially perpendicular to the airflow.

5 16. The temperature sensor arrangement according to claim 15, wherein said air passage is a duct of an aircraft.

17. The temperature sensor arrangement according to claim 16, wherein said aircraft duct is part of an aircraft bleed air system.

10 18. The temperature sensor arrangement according to claim 11, wherein said generally cylindrical outer casing is formed of stainless steel.

19. The temperature sensor arrangement according to claim 1, wherein said pattern of flow passages is formed by drilling into said generally cylindrical outer casing.

15 20. The temperature sensor arrangement according to claim 11, wherein the flow passages in said generally cylindrical outer casing are equally spaced.